

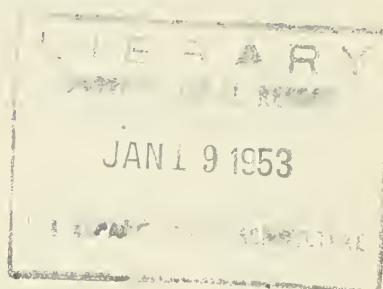
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MARKETING ACTIVITIES



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WHY WHACK THEM UP?

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There are benefits to be shared by both consumers and handlers in the proper preparation of poultry for retailing. With pictures and cost charts, Mr. Rinear of PMA's Poultry Branch Research Division demonstrates what thousands of poultry retailers are learning.

AIDS TO BETTER INSPECTION

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Standards for grades of fresh fruits and vegetables, in written form, can be pretty puzzling. Mr. Spangler, in charge of the Fresh Products Standardization Section of PMA's Fruit and Vegetable Branch, describes the visual aids and objective tests which make grades more understandable.

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Mr. Pauli and Mr. Hoecker of the Marketing and Facilities Research Branch, PMA, reveal surprising results of a study that should help boost retail grocers' gross profits.

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MOLASSES; A STICKY SITUATION

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The molasses industry is hard hit by economic problems. Here is a review of a recent conference sponsored by PMA's Sugar Branch looking toward a solution.

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Why Whack Them Up?

By Earl Rinear

Some retailers, when they cut up a chicken for sale as parts, just whack it up and get it over with.

And then there are also retailers who pay more attention to what the housewife wants--they cut up chickens so that there is more breast meat, more leg meat, more of all the most desirable parts than can be produced by less thoughtful workmanship. (It sounds impossible, but it really isn't even difficult.)

The thoughtful retailer thus has available for sale more of the better cuts of chicken meat than does the retailer who is not so careful--yet the cost of the whole bird is the same for both, other conditions being equal. That means more business for the careful retailer, and more returns from the chickens he sells--and from cut-up turkey, too, when it is handled similarly.

Much the same principle applies to eggs. It has been demonstrated that housewives look for and are willing to pay more for the best grades of eggs. The retailer who offers carefully graded eggs of high quality--what the consumer wants--can increase his sales.

It's easy to say those things. Getting the message across to tens of thousands of retailers, though, is a big job. But it is being done.

Ten thousand retailers in 25 States already have been shown how to improve their merchandising of poultry and eggs--in fact, not only shown, but given practice in actually doing the things necessary to improve their merchandising. These are the retailers who have attended merchandising schools conducted by the Poultry and Egg National Board, working under a contract with the U. S. Department of Agriculture. The program is administered by the Poultry Branch of PMA, under authority of the Agricultural Marketing Act of 1946. It is designed to measure experimentally the effectiveness of the instruction methods, the extent to which recommended practices are actually followed by the trainees, and the extent to which those practices actually increase sales and reduce deterioration and loss of poultry products.

At these poultry and egg retailing schools, modern merchandising methods are discussed, demonstrated, and practiced. The trainee learns how to purchase and maintain quality and prevent spoilage, so that the customer gets a better product; how to increase sales of fresh poultry by modern methods of displaying and pricing, so as to attract more customers; and how to sell more and better eggs by buying and maintaining the quality that the customer wants.



How to Cut a Chicken Into Parts for Frying

1 - Modern merchandising requires a chicken like this, plump, tender, juicy, suitable for all cooking purposes. 2 - Grasp wing tip, pull forward, start cutting half way up wing shank, then down into joint, keeping close to bone. 3 - As knife severs tendons, rotate wing backward so that knife passes around joint and upward. White meat is left on breast. 4 - Score skin around leg, avoid cutting into flesh. Leave skin to cover breast, to prevent "drying out." Grasp leg with free hand, bend it outward to snap hip joint. 5 - Cut forward along back to hip joint, rotating knife into hip socket and severing tendons. Extra weight is added to leg by carefully removing meat from back. 6 - Pull leg away while holding body as shown with knife hand. The "oyster" should be pulled away cleanly from bone. Cut connecting skin. "Oyster" meat can be pulled free only in this manner. 7 and 8 - With back of chicken toward operator, breast down, grip tail firmly as shown, cut closely along back through ribs where they join back, staying inside shoulder blade. Repeat on opposite side. 9 - Lift neck strip up and out, cut connecting skin. 10 - Nick cartilage with knife point, push blade downward toward table while lifting breast section upward with free hand.

Each trainee practices the new techniques by actually cutting up and preparing displays of the cut-up chicken and turkey. He also learns to use a pricing chart for the parts, so that he can meet the desires of his customers and still insure a reasonable profit for himself on the whole bird.

The legs and thighs, for dark meat, and the breast, for white meat, are the most popular parts of both chicken and turkey. Therefore, it is to the advantage of the consumer to have the largest possible amounts of good dark meat and good white meat on the appropriate poultry parts. Of the other parts, some have enough meat for eating in the same way as the legs and breast are eaten, some have enough to make a good stew, and the boniest parts are usually used for soups.

Skillful cutting up of poultry gives the consumer more of the meatier parts, which she wants and will buy at the higher prices per pound. The less meaty parts, which sell at lower prices, may be preferred at those prices. That is to the advantage of everybody concerned.

At the USDA-PENB schools, retailers are shown in detail the recommended practices for purchasing, cutting up, displaying, and maintaining the quality of poultry by icing and other types of refrigeration. Attractive displays are prepared and demonstrated.

The most profitable ways to buy, package, display and care for eggs to maintain quality also are shown--profitable to both the retailer, who can increase his sales, and to the consumer, who gets the quality she wants. Suggestions for tie-in sales are given, so that more eggs are sold and the consumer is given ideas for a tastier and more nutritious menu. And the retailer is shown how he can check up on the interior quality of the eggs he buys.

Recommended methods of cutting up frying chickens and turkeys are illustrated in the accompanying pictures. For brevity some steps are not shown. These methods are taught in the merchandising classes.

Also presented on pages 7 and 8 are the pricing charts used in the classes, which guide the retailer in making price differentials on the various parts. Selling the whole bird at a fair profit is simplified even though the parts are sold separately and at different prices. It must be borne in mind that the pricing chart is satisfactory only if the recommended methods are used for cutting up poultry, because a change in the cutting method changes the yields of the various parts.

To date, more than 500 poultry and egg merchandising schools have been held. The schools are sponsored in local areas by processors, wholesalers, retail associations, poultry producer associations, State departments of agriculture, personnel of agricultural colleges, chambers of commerce, equipment associations, and numerous other organizations and individuals. There is no charge to trainees for the course; they pay only their transportation and personal expenses. And requests for the training classes are coming in so fast that the number of trainees continues to grow by the hundreds.



How to Cut up a Turkey Into Parts for Retailing

1-Grasp wing, lift up. Cut into shoulder joint keeping close to bone to leave as much meat on breast as possible. Continue circular cut around wing joint. 2-Score skin around leg, cutting close to leg to leave skin with breast. Snap hip joint. Loosen dark meat next to back and in "oyster" cavity, to keep as much meat on leg as possible. 3-Grasp turkey by tail, set it on breast as shown. Cut between breast section and back on both sides. Place heel of knife hand on point of keel, pull tail and back section to break. Cut connecting tissue. 4-Holding turkey by rib cage, insert knife point into wing joint cavity. Cut outward along lower rib cartilage on both sides. 5-Again place heel of knife hand on point of keel, pull on rib cage to break shoulder joints. Cut remaining tissue connections. 6-Cut along each side of backbone on rib cage. Cut away thick section of meat over ribs on each side as cutlets. 7-Place breast section skin side down; cut away flesh close to keel bone on each side. 8-Continue loosening next to keel blade; don't cut through skin. 9-Boneless breast can be removed in two sections. Cut along each side of keel blade.

COST CHART

TABLE OF ESTIMATED CHICKEN PARTS COSTS TO RETAILER
BASED ON VARIOUS WHOLESALE PRICES OF 2½-POUND Eviscerated Chickens

Chicken Parts	2½ lbs. Drawn Weight Percent	COST PER POUND OF EVISCERATED CHICKEN											
		.41	.43	.45	.47	.49	.51	.53	.55	.57	.59	.61	.63
<u>Cost per pound of chicken part</u>													
Breast	29	.59	.62	.64	.67	.69	.71	.75	.77	.80	.82	.85	.87
Legs and Thighs	32	.59	.62	.64	.67	.69	.71	.75	.77	.80	.82	.85	.87
Wings	11	.16	.17	.20	.20	.23	.24	.25	.27	.28	.31	.32	.34
Back and Neck	19	.05	.05	.06	.07	.08	.08	.08	.10	.10	.11	.11	.11
Gizzard and Heart	04	.15	.16	.19	.20	.22	.24	.25	.26	.28	.31	.33	.34
Liver	03	.57	.59	.62	.63	.66	.69	.70	.73	.74	.75	.78	.80

*Costs based on average $2\frac{1}{2}$ lb. drawn chickens of No. 1 or U. S. Grade A quality. Chickens over or under $2\frac{1}{2}$ lbs. drawn and of below top-quality subject to individual adjustment based on cutting tests.

TABLE OF ESTIMATED TURKEY PARTS COSTS TO RETAILER
BASED ON VARIOUS WHOLESALE PRICES OF 25-pound EVISCERATED TURKEYS*

[illegible]

*Turkeys under 20 pounds are not recommended for cutting up to sell as parts. If done, however, adjust parts costs by adding 5 percent.

Aids To Better Inspection

By R. L. Spangler

"You can't hit what you can't see." That expression, born on the baseball diamond, may seem a bit far-fetched when applied to so prosaic a job as fruit and vegetable inspection. However, it does hold true in that field because a little-known but important part of the grade and standards work of the U. S. Department of Agriculture is the development of visual aids and other guides which will help fresh fruit and vegetable inspectors to hit grade factors "right on the nose."

One of the principal problems confronting supervising inspectors in the Federal and Federal-State Inspection Services for fresh fruits and vegetables is to secure and maintain uniformity of interpretations of grade factors among inspectors under their supervision. The very nature of these products makes it virtually impossible to define certain grade requirements in such a manner that they will be interpreted uniformly. For example, some of the U. S. grade standards specify that a product must meet certain shape requirements. So, if the U. S. No. 1 grade requires a product to be well formed, what is well formed? The definition in the standards may say it means the typical shape for the variety. However, such a definition leaves much to be desired because the definition is little, if any, better than the term "well formed" for showing the inspector where to draw the line on shape.

Visual aids prepared and distributed by the Fresh Products Standardization and Inspection Division of the Fruit and Vegetable Branch, PMA, provide a partial answer to the problem of maintaining uniformity of grade interpretation for certain factors which are difficult to understand or which cannot be objectively measured. The Division not only is responsible for developing and issuing U. S. standards for the products, but it is also the duty of the staff technicians to demonstrate to members of the Inspection Service the proper application of the standards to the product. Consequently, the Division is continually on the lookout for more effective and practicable means of doing this.

Very shortly after the inauguration of the standardization program almost 40 years ago it was realized that a successful Inspection Service depended to a large extent on visual aids and objective tests to supplement the printed words of some of the requirements of the standards. Thus, the visual aids and objective test programs developed simultaneously with the development of standards. Recognizing the importance of this phase of the work the Division has employed, for about 25 years, one or two artists to work continuously on the preparation of visual aid materials.

Visual aids developed in the Division are of several different types. Simple sketches have proven adequate for illustrating shape of some products. For example, shapes permissible in the various grades of water-melons and snap beans are sketched and mimeographed in outline on sheets attached to the standards and furnish ready reference to sorters and inspectors for properly classifying these products.

Black and white photographs are used extensively for illustrating shape of some products and the amounts of different types of blemishes permitted in various grades.

Color Photographs

Hand painted photographs are used to some extent to illustrate color factors such as blanching of celery. Lithographed reproductions are used particularly to illustrate grade factors of pecans and English walnuts such as color, shape and shriveling of kernels. During the last few years some color photographs have been prepared to illustrate various degrees of watercore in apples, bruising of peaches and apples, external discoloration of potatoes, skin breakdown of oranges and discoloration of peanuts. Difficulty of duplication so far has limited to a considerable extent the use of color photography in the preparation of visual aids.

Practically all of the photographic visual aids material has been photographed by the Department from specimens collected in the field by members of the Standardization and Inspection Service.

Certain types of grade defects of fresh fruits and vegetables cannot be adequately illustrated by sketches or photographs. To afford assistance in this field, the Division has developed what is probably the most important type of visual aids--hand-painted plaster of Paris models. These have been used extensively for illustrating lower limit shapes for various grades of onions, potatoes, tomatoes, cucumbers, sweet potatoes, pears, apples, and citrus fruits. They are also widely used to show minimum colors permitted in the various grades of apples and cherries, as well as certain types of blemishes and discolorations of citrus fruits.

Plaster Models

All plaster of Paris models are cast directly from specimens and after they are thoroughly dried they are painted by Department artists. These artists have a great deal of responsibility in the preparation of the finished model. If the purpose of the model is to illustrate color they must be able to match color precisely using a specimen as a guide. After the master model is approved they have the difficult task of duplicating as many models as are needed to supply the field offices. Finished models are assigned numbers before they are distributed. The master models are always retained in Washington.

Color comparators are the latest type of visual aids developed by the Division. In recent years strips of plexiglas have been used as the base for painting most of the desired colors. This transparent material has the advantage of allowing closer comparison of color of the specimen

with color of the comparator. Some of the color comparators which have been distributed to field offices include those illustrating different colored scars allowed in various grades for grapefruit and oranges, cross sections of tomatoes and carrots representing minimum red and orange colors, respectively, permitted in the U.S. No. 1 and U. S. No. 2 grades for these products for processing, and cross sections of watermelons illustrating the minimum of whitish-pink and pale red color.

Number of Aids in Use

Some idea of the importance of visual aids to the Fresh Products Inspection Service may be gained from a study of the distribution of the various types to terminal market and shipping point inspection offices. At present there are in these offices approximately 7800 plaster of Paris models, 6900 black and white photographs, 660 colored photographs and 400 color comparators. These have been distributed according to needs in 80 terminal market inspection offices and 48 shipping point offices.

It would be an ideal situation if it were possible to measure objectively all U. S. grade requirements with no determinations dependent upon the personal judgment of individuals. This is the goal sought in developing requirements of standards, but it is a goal almost impossible to obtain because of the nature of the products. At times criticism has been directed at the Department for not providing more objective measurements and tests for determining whether products meet or fail to meet grade requirements. However, a study of the requirements of the standards shows that a large percentage of them provide for objective determination of many grade factors. For example, no less than 35 sets of standards contain provisions specifying the size of areas of certain types of blemishes, discolorations and other defects permitted in the various grades. Also a large number of standards contain size specifications for the products. Consequently, through the years inspectors and standardization technicians have developed a number of ingenious measuring devices to facilitate the rapid inspection of the different products.

Measuring Devices

As an objective measuring device one should not overlook the common foot ruler used for measuring length of tops of bunched products, length of roots of root crops and similar measurements. No fruit and vegetable inspector's equipment would be complete without his set of aluminum sizing rings containing holes of various diameters and used primarily for measuring minimum and maximum diameters of many products. For measuring size of products such as grapefruit which are relatively large, special calipers have been developed. Measurement of peaches and some other products, where the diameter is defined as the shortest distance measured through the center at right angles to a line running from the stem to the blossom end, is made by slots on the edge of a sheet of fibre board or metal. Measuring equipment for size of nuts consists of a series of various sized slotted or round openings punched in fibre board or metal. Recently a Department technician developed an improved grape sizer consisting of different sized metal rings each having a handle with a hole punched

in it for carrying on a key ring. This sizer enables determination of undersized grapes without removing them from the bunch.

Another staff technician recently received an award for developing an area diameter gauge for the purpose of measuring sizes of blemishes. This gauge consists of circles of various diameters outlined on a piece of clear plexiglas which enables the inspector to directly compare the blemish with a circle of any specified size.

All determinations of weight specifications as provided in some standards are of course objective and each inspector carries one or more sets of scales for weighing such products as watermelons or heads of cabbage. Scales and a canvas bucket are standard inspectors' equipment for obtaining and weighing samples for inspection purposes.

Maturity Determination

A large number of fruits and vegetables are required to be mature in order to meet the U. S. grade requirements. The determination of the degree of maturity or ripeness of many products presents a difficult problem in inspection procedure. Consequently, a great deal of research has been done in an effort to develop practicable objective tests and procedures for such determination. Although much remains to be done in this field, the Department has developed or adopted procedures for determining maturity of many products objectively.

A pressure tester which registers the number of pounds pressure required for a certain sized plunger to penetrate the flesh is used to some extent by inspectors as a guide for determining the ripeness of pears and apples. Another type of pressure tester has proved helpful in determining the maturity of sweet corn for processing. The maturity of grapes, cantaloups and citrus fruits is objectively determined by first extracting juice from the product and then determining the percentage of soluble solids, by means of hydrometers or refractometers. Determination of the percentage of juice in limes and lemons is based on the relationship of the volume of juice extracted to the total volume of a given sample of fruit as determined by water displacement. A device known commercially as the "Tenderometer" is used by the Inspection Service to aid in the determination of maturity of peas for processing. The shearing principle is employed in the operation of this device which registers the amount of pressure required to shear a given quantity of peas. Moisture content, an important factor in the standards for peanuts, is objectively determined by various types of moisture testers on the market.

Work on Color Measure

During the past three years the Branch has cooperated with a number of Experiment Stations and private agencies in an effort to develop a foolproof method for measuring the color of tomatoes used for processing. Inspectors now sort fresh tomatoes into their respective color classifications by eye. But human eyes may be backed up before too long with the objective measurements of intricate mechanical "eyes."

Fewer Shelf Rows; More Sales

By Hans Pauli and R. W. Hoecker

Fewer rows of display per item of canned goods and more items stocked likely would increase the gross profit of retail food stores. This conclusion has been drawn from an experiment in five supermarkets in an eastern metropolitan area conducted by the U.S. Department of Agriculture as part of a broader survey of better utilization of selling space in food stores.

The study was made by the Marketing and Facilities Research Branch of the Production and Marketing Administration, under authority of the Agricultural Marketing Act of 1946, and covered the relation of size of shelf display to sales of canned fruits and vegetables. The experiment in the eastern supermarkets included 17 representative canned fruits and vegetables. A summary of the findings follows:

The average sales and gross margin per unit of display space (row or shelf foot) with a 2-row display exceeded by nearly 5 to 1 the additional sales or gross margin per added row of display. Sales of the 17 selected canned fruits and vegetables showed an increase of 10 percent of sales for each row added to a display consisting of two or more rows. Total weekly sales of these items in the five supermarkets were 590 cans when 2-row displays were made. Sales increased an average of 60.9 cans per row added, up to six rows, the limit of the experiment. Likewise, sales decreased an average of 10 percent as the size of display was decreased from 6 to 2 rows.

Gross margin per shelf foot for the first two rows was at an average rate of \$1.34 while for each additional row it was at the average rate of \$0.29. With the 2-row display, weekly gross margins per linear shelf foot for the individual items ranged from \$4.40 to \$0.47. Returns per linear shelf foot for every additional row displayed ranged from a minus \$0.16 to a plus \$0.99.

The fact that the average sales and gross margin per unit of display space (row or foot) with the 2-row display greatly exceeds the additional sales or gross margin per added unit of display emphasizes the importance of considering the addition of new items to the shelf before increasing beyond two rows the display space of all except fast-moving items.

Estimates of the effects of applying these conclusions to present canned fruit and vegetable displays in two typical supermarkets show that worth while economies might be made. If the proposed displays were used instead of the present displays in one of these supermarkets, it is estimated that 36 percent of the shelf space (currently yielding not more than

46 cents gross margin per shelf foot) now used for the items studied would be made available for other items. Gross margin per shelf foot could be increased from \$1.76 to an estimated \$2.50. In the second supermarket if the proposed displays were to replace the current display, an estimated 43 percent of the shelf space (currently yielding not more than 56 cents gross margin per shelf foot) would be made available for other items. Gross margin per shelf foot in this supermarket could be increased from \$1.68 to an estimated \$2.51.

Although individual item sales increased or decreased as rows were added or dropped, the sales of all canned fruits and vegetables probably changed considerably less since there probably was substitution by the customer of one item or another.

Effective utilization of the selling space in retail food stores helps reduce the cost of retailing. Lower retail costs are of immediate help to the retailer and, in the long run, reductions in marketing costs help producers and consumers.

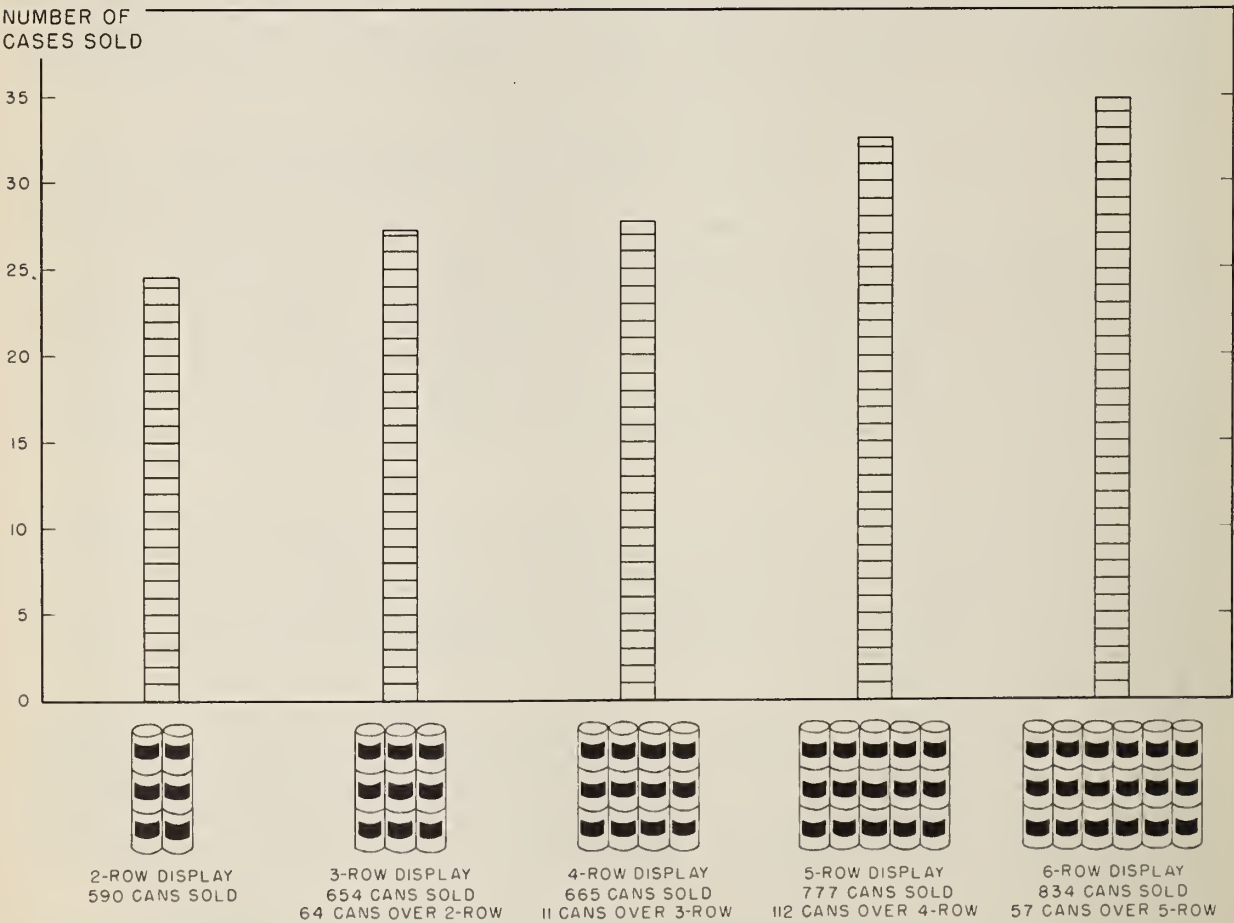


Figure 1.--Relationship of number of rows displayed to weekly sales per store of 17 selected canned fruit and vegetable items in 5 supermarkets.

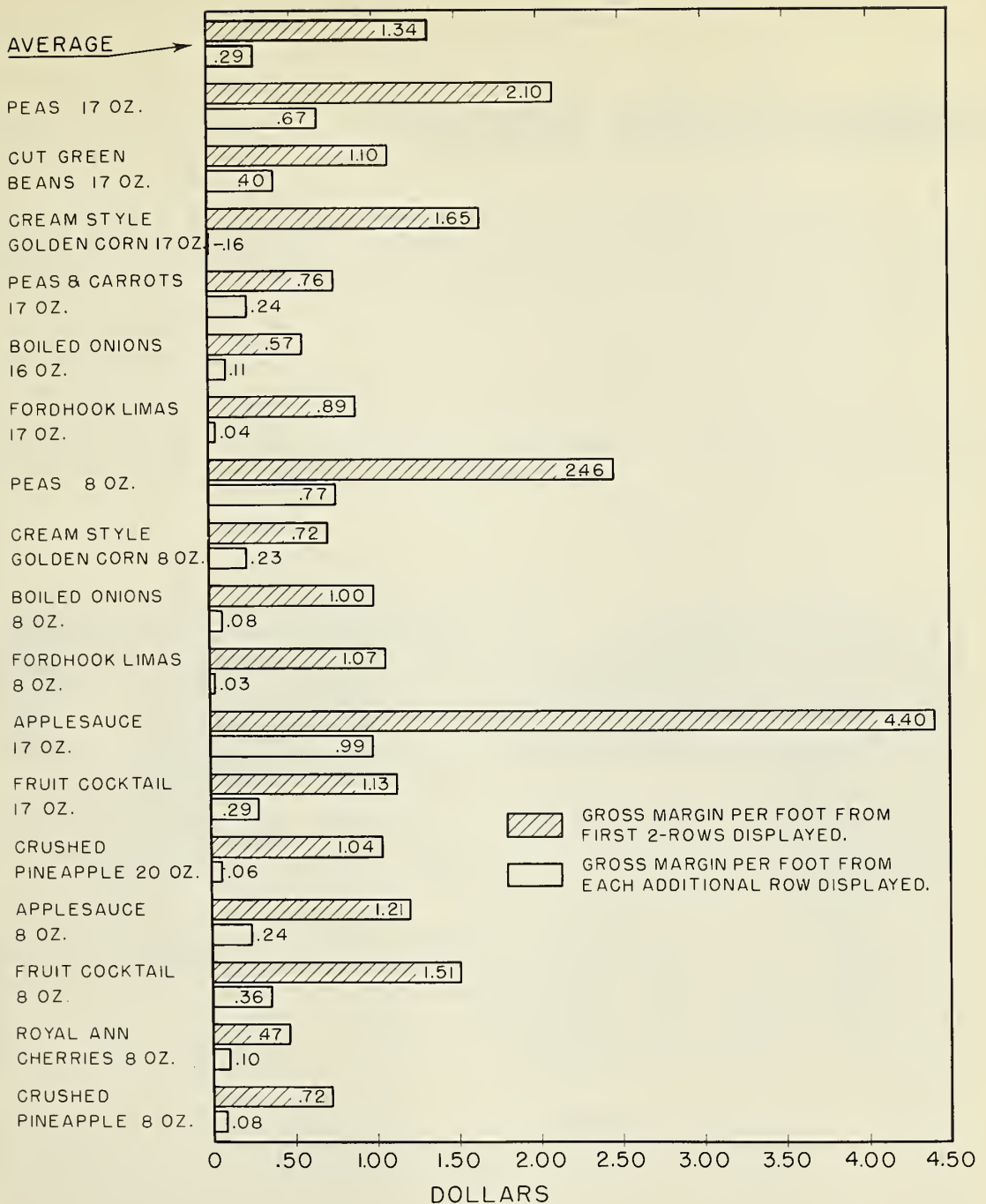


Figure 2.--Weekly gross dollar margin per store per shelf foot received from display of 17 selected canned fruit and vegetable items in 5 super-markets.

(The complete report on this survey is now being printed and should be available soon from the Marketing and Facilities Research Branch of the Production and Marketing Administration, USDA, under the title: "Relation of Size of Shelf Display to Sales of Canned Fruits and Vegetables."

Million Dollar Market

The benefits to producers, handlers and consumers of a modern city wholesale market for farm crops is strikingly emphasized in the case of the State Farmers Market, Columbia, South Carolina, which recently observed its first anniversary.

The Columbia Market was built according to specifications and on a site recommended by the Marketing and Facilities Research Branch, of the Production and Marketing Administration, U.S. Department of Agriculture. These recommendations were based on a study completed early in January 1949 under authority of the Agricultural Marketing Act of 1946.

Opened in October 1951, the market on the outskirts of the city averaged a monthly business of well over a million dollars during the first year. The actual annual total was \$15,650,000.

The State-owned market represents a million dollar investment by the South Carolina State Agricultural Marketing Commission, plus \$300,000 invested by dealers on the market for refrigeration and other equipment.

These figures should be a helpful guide to other communities which lack up-to-date marketing facilities. The modern wholesale market brings together all segments of the fresh food industry for their common convenience, economy, and efficiency. It provides better distribution of perishables of better quality to heavily populated areas.

From a monetary standpoint, white potatoes led the list of individual products with a value of \$1,869,000 the first year, with tomatoes running a close second, being worth \$1,769,000. Bananas followed with a turnover amounting to \$1,430,000. Next came the impressive South Carolina crop of watermelons which account for most of the \$1,190,400 melon business transacted during the first year.

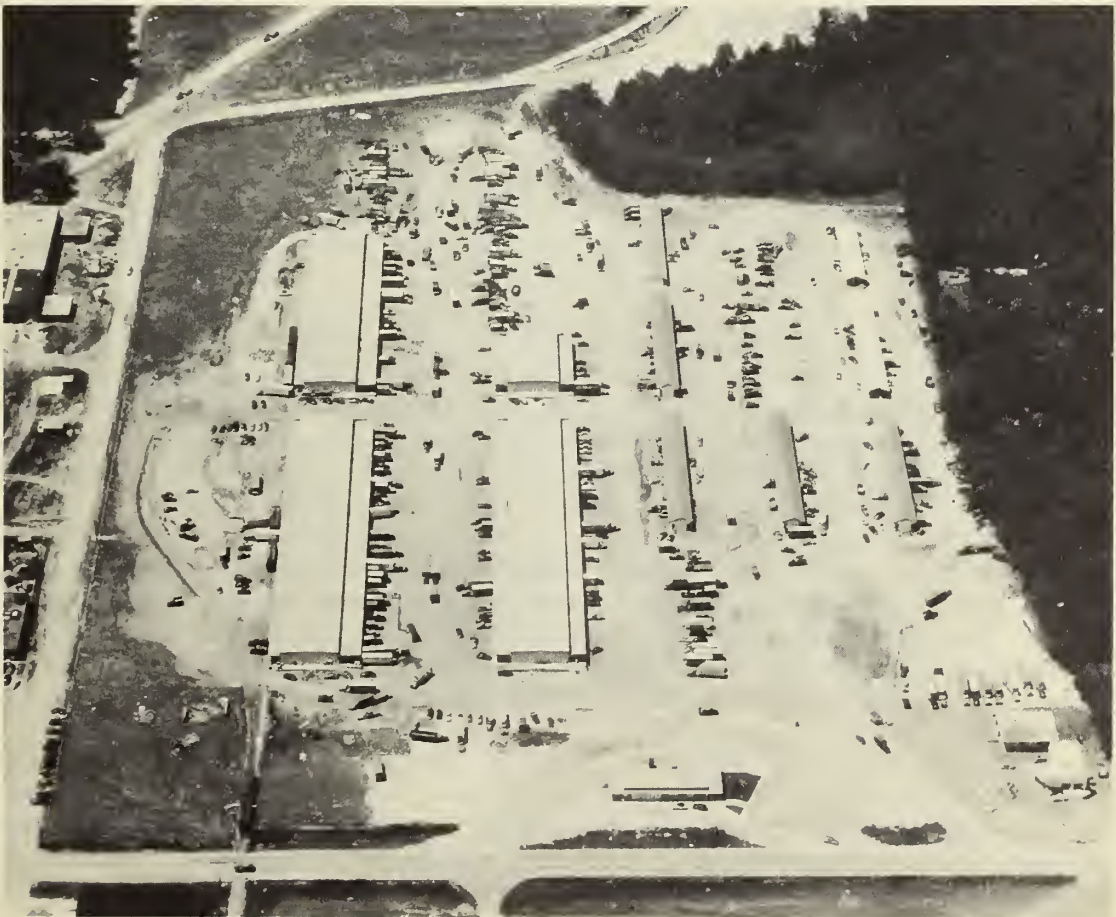
Carolina cantaloupes moved on the Columbia market to the extent of \$462,698 the first growing season. Sales of other products which exceeded \$100,000 each in value were oranges, cabbage, lettuce, onions, apples, grapes, lemons, corn, sweet potatoes, peaches, lima beans, cucumbers, squash, greens, grapefruit, peppers, peas, okra, carrots, tangerines, turnips and tops and plants.

Truck receipts were equivalent to more than 6,000 carlots and constituted about 85 percent of the total incoming produce. Rail shipments bringing fruits and vegetables to Columbia's market the first year totaled 1,059 cars, with lettuce, bananas and white potatoes leading the list. Twenty-three different varieties of products arrived by rail from 33 States of this country and three products arrived from other countries.

The majority of shipments from the market were to the Southeastern States. Michigan was the most distant point to which products were forwarded.

At the Columbia market, sixty-one store units have been provided for dealers with 127 stalls under sheds and abundant open selling space for farmers and truckers. There also are a service station, 2 restaurants and a barber shop. The present facilities occupy 30 acres and 20 acres have been set aside to provide for expansion. Interested groups from seven States and five foreign countries have visited Columbia's model market to carry back home data on improved marketing facilities. Cities which have shown such interest are Houston, Tex.; Boston, Mass.; Indianapolis, Ind.; Richmond and Norfolk, Va.; New Orleans, La.; Baltimore, Md. and Raleigh, N. C.

In a single day, last May 16, 380 individual buyers from 5 States purchased a total of \$114,000 worth of products on the Columbia market. On another day, a total of 589 farmers used the market. The produce dealers are cooperating in an advertising campaign to encourage market sales.



This picture of the Columbia, S. C. market, taken in June 1952, indicates the activity that brought over \$1,000,000 monthly in business.

Molasses; A Sticky Situation

By John F. Reilly

Shades of an unhappy past again have arisen to haunt an agricultural commodity. It is a problem that was all too familiar to producers of farm products back in the 1930's -- overabundance in the face of a potential market actually needing the product but prevented from using it because of economic problems.

This time the commodity is molasses. A by-product of sugar production, but economically important to both producers and processors of that product, molasses rapidly is losing its historic market in the production of commercial alcohol. At the same time, there is a great potential market for molasses in expanded use in livestock feed, but certain economic barriers, particularly distribution and storage problems, are preventing full exploitation of this outlet.

With the idea of exploring these problems and, if possible, seeking a solution, the U. S. Department of Agriculture on November 14 sponsored a meeting of leaders in the molasses, feed, and related industries here in Washington. The session was devoted to discussion of possible ways and means of speeding up a shift from utilization of molasses for alcohol manufacture into use as livestock feed, and a review of research, promotion, and service activities, that might help make this change possible.

Representatives of domestic cane and beet sugar and molasses producers, off-shore sugar and molasses interests, feed producers and dealers, chemical companies, brokers, representatives of the Cuban, Dominican, and Canadian governments, citrus producers and citrus molasses interests were present at the meeting which was held at the invitation of the Production and Marketing Administration. Both research and "action" agencies of the Agriculture Department were represented as were some State Departments of agriculture and certain agricultural colleges. Consensus of opinion at the meeting appeared to be that a shift in all molasses use from alcohol production into livestock feeds was not only desirable but essential if the product is to recover economically, but that a rapid changeover depends upon the solution of many problems.

Historically, the price of molasses has tended to follow industrial alcohol prices. At the beginning of the conflict in Korea prices of both commodities rose sharply; but since 1951 they have dropped off substantially. The smaller-than-anticipated quantities of alcohol required for emergency usage is regarded as one of the major causes for this price decline. A complicating factor has been the boom in synthetic alcohol production. By 1954, the synthetic alcohol industry is expected to reach an annual capacity of 225 million gallons, more than the normal peace-time

utilization of industrial alcohol in this country. Therefore, it is evident that production costs of molasses alcohol will have to meet the lower price of the synthetic product or molasses be driven from the alcohol market.

Sugar industry representatives present at the conference were apprehensive that continued low prices for molasses will seriously affect their earnings. They explained that the domestic cane industry received about 10 percent of its income from molasses in 1951 but that since then prices for the product have declined to levels where producing mills receive only slightly more than enough to cover storage and handling costs for the product, while cane growers receive practically nothing.

In urging wider use of molasses in livestock feed, speakers stressed that it is excellent for this purpose; is high in carbohydrate content; adds palatability to other feeds; binds feeds together; and settles feed dust. In addition, it was stated, the absorption of molasses by the feed trade is not likely to drive any other feed from the market.

Representatives of some of the organizations present illustrated the tremendous potential feed use for molasses with two illustrations:

(1) If all the cattle in Texas were to consume 4 pounds or about one-third of a gallon of molasses daily, annual consumption of molasses would amount to more than 800 million gallons -- almost twice the total supply available to the United States.

(2) There are enough dairy cattle in the Northeastern States to consume all the molasses available if the cattle were given only a fraction of the total amount they could use as feed.

A suggestion was made that to immediately solve the surplus molasses problem, without waiting for feed use to expand, it would be advisable to earmark excess supplies of molasses over feed and other higher priced usages for use only in production of alcohol. In other words, during a transition period to feed use there should be a segregation of surplus molasses so that the lower prices paid by alcohol manufacturers would not tend to hold down prices over the entire industry.

Objections to this proposal were raised in the meeting. Some questioned its practicability since feed users naturally would try to buy molasses as cheaply as possible. The economic feasibility of selling molasses at a higher price to the feed trade, a permanent and expanding consumer, while the alcohol trade, a temporary and decreasing consumer, obtained molasses at a lower price, also was questioned.

Despite the desirable features of molasses as a feed, and the huge potential market for it among feeders, there are several reasons why the product is not used in greater quantities. These reasons were discussed in some detail at the November 14 meeting.

One of the major reasons cited was the lack of adequate distribution facilities in many areas. It was pointed out for instance that a molasses

user, located within 50 miles of a port city receiving molasses in bulk, had to pay 52 cents per gallon for molasses delivered in drums. Yet the quoted f.o.b. tank car price at the port was only 11 cents a gallon. It was explained that if this molasses was Puerto Rican, the net price to the mill would have been 5 cents per gallon, or less, and the Puerto Rican cane grower would have received nothing since growers there get no portion of molasses returns unless the mills receive more than 5 cents a gallon. So, of the 52 cents paid by the user for a gallon of molasses, 5 cents went to the producing mill and the remainder to distribution costs. This instance was NOT cited as a typical example of the cost of barreled molasses, but was used to illustrate the effect of an inadequate distribution system on marketing costs.

An encouraging step toward the solution of this distribution problem was said to be the delivery of bulk molasses by tank trucks on the West Coast, in certain sections of the Northeast and Southwest and in the Gulf area where both blackstrap and citrus molasses are so distributed. This method materially reduces distribution costs and relieves some handling difficulties. Farmers in areas so served can fill their automatically controlled feeding tanks directly from the trucks. For feed mixers, particularly smaller ones, the tank truck delivery system makes it possible to receive molasses in small quantities thereby reducing inventory price risks.

Another problem raised was the difficulty of handling the product because of its heavy consistency, particularly in cold weather. Other reasons molasses is not used more frequently in livestock feeding were said to be ineffective merchandising and marketing practices together with inadequate producer storage capacity. The latter, at times, has forced large amounts of molasses on a market that could not readily absorb it. In addition, both producers and distributors have granted special price privileges to large buyers. These conditions, it was stated, have tended to create an unstable market and have led to lack of confidence in the molasses industry by many users and potential users.

Cuba, the largest supplier of the molasses used in this country, must move at least 175 million gallons before May 1, 1953 to make room for new crop molasses, a Cuban spokesman explained. In order to do so a two-price system has been instituted there; molasses for feed users selling at 7 cents per gallon and that going into alcohol selling at 4.5 to 4.75 cents per gallon depending upon time of removal from Cuba. The representative of the industry there explained that it was almost impossible to dump molasses inland because of health and sanitation reasons, and added that dumping at sea would be costly and impracticable. (It has been reported that Cuba has sold all but 10 to 20 million gallons of her 1952 molasses supply under the system outlined above.)

A distributor's representative stated that the molasses industry cannot plan on continued or increased use of their product in feed until merchandising and sales practices are such that prices and conditions of purchase are the same to all users regardless of size, and until price fluctuations have been stabilized enough to avoid the danger of serious inventory losses.

Mention was made that many potential molasses users are not familiar with its feeding value. Many others do not know how to use it, either as a carbohydrate feed, a preservative for silage, or in the salvage of unpalatable roughages. In addition to efficient distribution and stability in supplies and price, education with regard to value and use of molasses is necessary to promote increased utilization, it was stressed.

Another issue raised at the meeting was whether small farmers with only a few head of livestock could be reached by any liquid molasses distribution system. The opinion seemed to be that dried molasses or dried feeds of high molasses content which could be bagged and sold in small amounts through local feed stores was a promising method of making molasses available to this type of user. Experimental development of such feeds has been going on in Puerto Rico and Hawaii, and several concerns are marketing small quantities of feeds with a high dried molasses content, using such products as bagasse pith and corn oil meal as carriers.

Certain problems exist in connection with the marketing of such feed. These include packaging and storage problems occasioned by their tendency to cake, and their higher costs to users. One representative stated that pure dried molasses manufactured by a patented process could be sold for about \$62.50 per ton at current molasses prices.

The discussion developed that ammoniation of molasses offers possibilities for increasing feed utilization. One company has this process in the pilot plant stage now and expects to be in commercial production soon. It was reported that initial tests indicate that ammoniated molasses flows better and that there is less possibility of fermentation in hot weather. It is also possible to increase the total protein content by 15 percent during ammoniation.

With regard to education of potential feed users through advertising, some companies reported that they do considerable advertising and others indicated that they advise customers how to use molasses in mixed feeds as well as in direct feeding. Feed journals have been found to be the most effective advertising medium. Personal contacts were stressed by some as an effective method of expanding utilization; particularly in new areas of use. It was stressed that new users also should be instructed on the equipment necessary for proper handling of molasses.

It was agreed that many potential users have not been reached by existing promotional and educational efforts. The point was raised regarding who should foot the promotional and educational bill. A distributor pointed out that large scale advertising is expensive and too much for one company to bear. A statement also was made that producers had the greater interest in expanded utilization and would receive the benefit of any higher prices advertising might create.

It was pointed out that the Department of Agriculture could make a valuable contribution through additional educational work. Such activity is being carried on by USDA in those States where molasses now is readily available. The Extension Service intends to call to the attention of marketing and livestock specialists throughout the country the desira-

bility for expanding the use of feed molasses.

The Sugar Branch of PMA is now publishing a weekly molasses market news report that goes to producers, distributors, and users. This shows prices and general supply-demand conditions at major market points for blackstrap, beet, citrus, and hydrol molasses. The Sugar Branch also hopes to provide a further service to molasses users by issuing a pamphlet for wide distribution which will contain information pertaining to the value of molasses, various uses, methods and rates of usage for specific purposes, equipment suitable for farm handling, together with the costs of such equipment.

The opinion seemed to be generally held that in the past research on the use of molasses has been valuable and that it should be continued. Speakers stressed that to be of maximum value the results of research had to be given to users in an understandable form.

Current research may show that molasses possesses additional value as a feedstuff, perhaps in supplying trace elements that aid in the stimulation of better digestion in the rumen of cows, it was brought out.

One field in which more work was suggested was in determining how a greater percentage of molasses can be incorporated in mixed feeds for livestock. There was some feeling that the use of molasses in poultry and swine feed had not been fully explored.

The development of practical standards for molasses used in feeds may also be important in expanding feed usage. Such standards would provide assurance to users that products so graded would be uniform in quality. In addition, such standards might provide a more satisfactory basis for contractual arrangements between producers and distributors, it was suggested.

Field research has been done by two molasses firms in Texas and Florida on feeding molasses in open troughs to range cattle. Molasses was fed as a supplement to grass and it was found that cattle limited themselves to reasonable amounts. A two-to-three weeks supply of molasses of a high solids content could be put out without spoilage. Other research has been conducted in the past by public and private agencies, the results of which have shown the value of molasses as a carbohydrate feed, as a preservative in silage, and the proper rates for use in feed.

In conclusion, the meeting seemed agreed that if the consumption of molasses could be hooked up with feed use, rather than with alcohol use as in the past, sudden and severe price shifts could be avoided. Carbohydrate feed prices change, but far less sharply than those of alcohol. It appears likely therefore that if the price of molasses depended on the price of other carbohydrate feeds, a more stable molasses price could be expected. Producer returns would be more even from year to year, distributors would be less likely to take serious inventory losses, and dealers in mixed feeds could better plan their formulas and better judge the advisability of investing in mixing equipment.

ABOUT MARKETING

The following addresses and publications, issued recently, may be obtained upon request. To order, check on this page the publications desired, detach and mail to the Production and Marketing Administration, U. S. Department of Agriculture, Washington 25, D. C.

Addresses:

The Role of Market Grades in Swine Production, remarks by John C. Pierce, Jr., at California Farm Bureau meeting, Fresno, Calif., Nov. 10, 1952. 8 pp. PMA (Processed)

Publications:

1953 Production Goals Program, Potatoes and Sweet Potatoes, Nov. 1952. 12 pp. PMA (Processed)

1953 Production Goals Program, Winter Vegetables, July 1952. 22 pp. PMA (Processed)

1953 Production Goals Program, Spring Vegetables, Oct. 1952. 33 pp. PMA (Processed)

U. S. Standards for Cauliflower (Effective December 14, 1952), Issued Dec. 9, 1952. 3 pp. (Processed)

Agricultural Conservation Program, Statistical Summary 1951, Nov. 1952. 112 pp. PMA (Printed)

Agricultural Conservation Program, Summaries by States 1951, Oct. 1952. 55 pp. PMA (Processed)

The "18 Condensery" Milk Price Series. Oct. 1952. 19 pp. PMA (Processed)

A Study of the Washing and Storage of Dirty Shell Eggs, Circular No. 911, Oct. 1952. 32 pp. PMA (Printed)

Consumer Purchases of Fruits and Juices in October 1952. Nov. 1952. 16 pp. PMA (Processed)

Fruits and Juices Availability in Retail Food Stores, Aug. 1952. Nov. 1952. 30 pp. PMA (Processed)

Consumer Fruit and Juice Purchases July-Sept. 1952, by Regions and Type of Retail Outlet. Nov. 1952. 61 pp. PMA (Processed)

Know the Poultry You Buy, PA-170. Nov. 1952. (Poster) PMA (Printed)
Also available in large wall size.

Dairy and Poultry Market Statistics 1951. Statistical Bulletin No. 116, Sept. 1952. 114 pp. PMA (Printed)

U. S. Grades (Slaughter Steers) Poster. PMA (Printed)

Marketing Study of Factors Affecting the Quantity and Value of Products Obtained from Soybeans. June 1952. 35 pp. PMA (Processed)

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